

Application/Control Number: 10/657,318

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1. An external drive assembly for use with an impeller of a supercharger comprising:
a multibelt pulley adapted to receive a drive source;
an impeller pulley drivingly coupled to the impeller;
an external drive belt having at least one rib coupled to the multibelt pulley to drive the impeller pulley;
an adjustable idler engagingly connected to the external drive belt;
wherein the impeller pulley and the multibelt pulley engage with the at least one rib of the external drive belt.
2. The external drive assembly according to claim 1 wherein the adjustable idler is spring loaded.
3. The external drive assembly according to claim 1 further comprising an internal drive assembly for coupling the impeller pulley to the impeller.
4. The external drive assembly for use with a supercharger according to claim 2 wherein the external drive belt is selected from the group consisting of:
serpentine belts, polydrive belts or toothed belts.
5. The external drive assembly for use with a supercharger according to claim 4 wherein the multibelt pulley engages at least the external drive belt and a motor belt.
6. The external drive assembly for use with a supercharger according to claim 5 wherein the multibelt pulley is adapted to receive a rotatable shaft of an existing engine component.
7. The external drive assembly for use with a supercharger according to claim 6 wherein the multibelt pulley replaces the pulley of the existing engine component.

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Claims 8-28 has been canceled

29. A method of making a supercharger comprising the steps of:

providing a impeller having a body with a base and an air intake end and further having precision made air vanes attached to the body wherein the precision made air vanes each extends from the base to the air intake end and wherein the precision made air vanes have air sealing surfaces;

positioning the impeller in a precision made inner area of a volute chamber housing;

precisely spacing the air sealing surfaces of the precision made air vanes relative to the precision made inner area;

coupling an external drive assembly to the impeller for driving and rotating the new impeller; and

coupling the external drive assembly to a drive assembly mount.

30. The method of making a supercharger according to claim 29 wherein the

coupling the external drive assembly step further comprises the steps of:

providing a multibelt pulley adapted to couple to a drive source;

coupling an impeller pulley to the impeller and to the drive assembly mount, and coupling an external drive belt to the multibelt pulley and the impeller pulley wherein the external drive belt is being driven by the multibelt pulley to drive the impeller pulley.

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